



Rocky Flats Environmental Technology Site

TYPE 1 AND TYPE 2 RADIOLOGICAL PRE DEMOLITION SURVEY REPORT

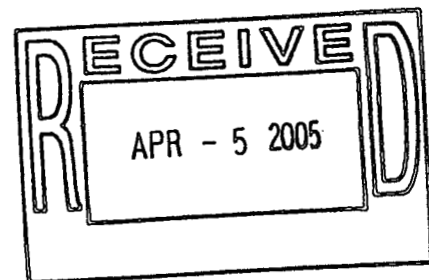
WESTSIDE BUILDING EXTERIORS

March 2, 2005

REVISION 0

Change Control:

- Rev 1. Revised Attachment B, Radiological Data Summary Sample Location column - 3/24/05.
Rev 1. Revised Attachment C, DQA Detail - 3/24/05.



**CLASSIFICATION REVIEW NOT REQUIRED PER
EXEMPTION NUMBER CEX-005-02**

ADMIN RECORD

SW-A-005066

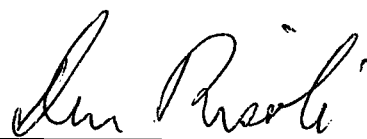
1/2

**TYPE 1 AND TYPE 2
RADIOLOGICAL
PRE DEMOLITION SURVEY REPORT**

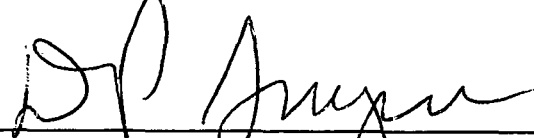
WESTSIDE BUILDING EXTERIORS

March 2, 2005


REVISION 0

Reviewed by: 
Don Risoli, Quality Assurance

Date: 3/2/05

Reviewed by: 
D.P. Snyder, RISS ESH&Q Manager

Date: 3/2/05

Approved by: 
Cameron Freiboth, K-H D&D Project Manager

Date: 03/02/05

TABLE OF CONTENTS

ABBREVIATIONS/ACRONYMS	IV
EXECUTIVE SUMMARY	V
1 INTRODUCTION	1
1.1 PURPOSE	2
1.2 SCOPE.....	2
1.3 DATA QUALITY OBJECTIVES	2
2 HISTORICAL SITE ASSESSMENT	2
3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS	3
4 CHEMICAL CHARACTERIZATION AND HAZARDS.....	3
5 PHYSICAL HAZARDS	4
6 DATA QUALITY ASSESSMENT	4
7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES	4
8 FACILITY CLASSIFICATION AND CONCLUSIONS.....	4
9 REFERENCES	5

ATTACHMENTS

- A DOE and CDPHE Approval Letters
- B Radiological Data Summaries and Survey Maps
- C Data Quality Assessment (DQA) Detail

ABBREVIATIONS/ACRONYMS

ACM	Asbestos containing material
Be	Beryllium
CDPHE	Colorado Department of Public Health and the Environment
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act
DCGL _{EMC}	Derived Concentration Guideline Level – elevated measurement comparison
DCGL _w	Derived Concentration Guideline Level – Wilcoxon Rank Sum Test
D&D	Decontamination and Decommissioning
DDCP	Decontamination and Decommissioning Characterization Protocol
DOE	U.S. Department of Energy
DPP	Decommissioning Program Plan
DQA	Data quality assessment
DQOs	Data quality objectives
EPA	U.S. Environmental Protection Agency
FDPM	Facility Disposition Program Manual
HVAC	Heating, ventilation, air conditioning
HSAR	Historical Site Assessment Report
IHSS	Individual Hazardous Substance Site
IWCP	Integrated Work Control Package
K-H	Kaiser-Hill
LBP	Lead-based paint
LLW	Low-level waste
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
NORM	Naturally occurring radioactive material
NRA	Non-Rad-Added Verification
OSHA	Occupational Safety and Health Administration
PARCC	Precision, accuracy, representativeness, comparability and completeness
PCBs	Polychlorinated Biphenyls
PDS	Pre-demolition survey
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RFFO	Rocky Flats Field Office
RLC	Reconnaissance Level Characterization
RLCR	Reconnaissance Level Characterization Report
RSP	Radiological Safety Practices
SVOCs	Semi-volatile organic compounds
TCLP	Toxicity Characteristic Leaching Procedure
TSA	Total surface activity
VOCs	Volatile organic compounds

EXECUTIVE SUMMARY

In Fiscal Year 2003, a proposal was submitted to the Department of Energy (DOE) and the Colorado Department of Public Health and Environment (CDPHE) for performing the pre-demolition radiological surveys for the exterior surfaces of various "western" facilities of the Rocky Flats site as a single set of buildings. This approach was a deviation from the site-wide Pre-Demolition Survey Plan (MAN-127-PDSP). DOE and CDPHE approved this approach via Department of Energy letter, 02-DOE-01598, dated December 13th, 2002; and approved by CDPHE letter, *RE: Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)*, dated January 27, 2003; (refer to DOE and CDPHE letters in Attachment A). The subsequent radiological PDS was performed in FY 2003. The facilities contained within the scope of this PDSR (i.e., the "western" facilities) are shown on the survey map and listed in the data summary table contained in Attachment B (only the buildings with sample points on them were within the scope). Other facilities on the survey map that do not have sample points on them were not within the scope, and will be (or have been) PDS characterized and documented in standalone PDSRs.

Although this radiological PDS effort was completed in FY 2003, and the raw data results submitted to DOE and CDPHE shortly thereafter, DOE has just recently requested that this data be summarized in a PDSR and submitted for official review and approval. The PDS characterizations of the "eastern" facilities will be performed in accordance with the standard PDSP requirements.

The radiological PDS was performed to enable facility "Typing" per the DPP (10/8/98) and compliant disposition and waste management of the Westside Building Exteriors. Because these facilities were anticipated Type 1 and Type 2 facilities, the characterization was performed in accordance with the PDSP (with approved deviations). All exterior facility surfaces were characterized in this PDS, including the exterior walls, roofs, and surrounding concrete pads. Environmental media beneath and surrounding the facility was not within the scope of this PDSR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

The PDS encompassed radiological characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical and radiological hazards identified in the facility-specific Historical Site Assessment Reports. Any necessary chemical characterization of the facility exterior surfaces (e.g., asbestos, beryllium, PCBs, RCRA/CERCLA constituents) will be evaluated and samples collected (as necessary) during the PDS of the interior surfaces of these facilities.

Results of this PDS indicated that no radiological contamination exists in excess of the PDSP unrestricted release limits of DOE Order 5400.5. Based on the results of this PDS effort, these "western" facilities can be demolished from an exterior PDS radiological standpoint – after the interior PDS characterization is performed and approved.

1 INTRODUCTION

In Fiscal Year 2003, a proposal was submitted to the Department of Energy (DOE) and the Colorado Department of Public Health and Environment (CDPHE) for performing radiological pre-demolition surveys on the exterior surfaces of various "western" facilities of the Rocky Flats site as a single set of buildings. This approach was a deviation from the site-wide Pre-Demolition Survey Plan (MAN-127-PDSP). DOE and CDPHE approved this approach via Department of Energy letter, 02-DOE-01598, dated December 13th, 2002; and approved by CDPHE letter, *RE: Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)*, dated January 27, 2003; (refer to DOE and CDPHE letters in Attachment A). The subsequent radiological PDS was performed in FY 2003. The PDS characterizations of the "eastern" facilities will be performed in accordance with the standard PDSP criteria. The facilities contained within the scope of this PDSR (i.e., the "western" facilities) are shown on the survey map and listed in the data summary table contained in Attachment B (only the buildings with sample points on them were within the scope). Other facilities on the survey map that do not have sample points on them were not within the scope, and will be (or have been) PDS characterized and documented in standalone PDSRs. These facilities no longer support the RFETS mission and need to be removed to reduce Site infrastructure, risks and/or operating costs.

The radiological PDS was performed to enable facility "Typing" per the DPP (10/8/98) and compliant disposition and waste management of the Westside Building Exteriors. Because these facilities were anticipated Type 1 and Type 2 facilities, the characterization was performed in accordance with the PDSP (with approved exceptions). All exterior facility surfaces were characterized in this PDS, including the exterior walls, roofs, and surrounding concrete pads and sidewalks. Environmental media beneath and surrounding the facility was not within the scope of this PDSR and will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

The PDS encompassed radiological characterization to enable compliant disposition and waste management pursuant to the D&D Characterization Protocol (MAN-077-DDCP). The characterization built upon physical and radiological hazards identified in the facility-specific Historical Site Assessment Reports. Any necessary chemical characterization of the facility exterior surfaces (e.g., asbestos, beryllium, PCBs, RCRA/CERCLA constituents) will be evaluated and samples collected (as necessary) during the RLC or PDS of the interior surfaces of these facilities.

Before these facilities can be removed, a PDS must be conducted; this document presents the exterior surface PDS radiological results. The PDS was conducted pursuant to the D&D Characterization Protocol (MAN-077-DDCP) and the PDSP, except for the deviations outlined in the DOE and CDPHE approval letters referenced in Attachment A. The PDS built upon physical, chemical and radiological hazards identified in the various facility-specific *Historical Site Assessment Reports*. Although this radiological PDS effort was completed in FY 2003, and the raw data results submitted to DOE and CDPHE shortly thereafter, DOE has just recently requested that this data be summarized in a PDSR and submitted for official review and approval.

1.1 Purpose

The purpose of this report is to communicate and document the results of the radiological PDS effort. A PDS is performed before building demolition to define the pre-demolition radiological and chemical conditions of a facility. The pre-demolition conditions are compared with the release limits for radiological and non-radiological contaminants. PDS results will enable project personnel to make final disposition decisions, develop related worker health and safety controls, and estimate waste volumes by waste types.

1.2 Scope

This report presents the radiological PDS exterior surfaces radiological conditions of the Westside facilities. The PDS characterizations of the "eastern" facilities will be performed in accordance with the standard PDSP criteria. The facilities contained within the scope of this PDSR (i.e., the "western" facilities) are shown on the survey map and listed in the data summary table contained in Attachment B (only the buildings with sample points on them were within the scope). Other facilities on the survey map that do not have sample points on them were not within the scope, and will be (or have been) PDS characterized and documented in standalone PDSRs. Environmental media beneath and surrounding the facilities was not within the scope of this PDSR and will be addressed using the Soil Disturbance Permit process and in compliance with RFCA.

1.3 Data Quality Objectives

The Data Quality Objectives (DQOs) used in designing this PDS were the same DQOs identified in the Pre-Demolition survey Plan for D&D Facilities (MAN-127-PDSP). Refer to section 2.0 of MAN-127-PDSP for these DQOs.

2 HISTORICAL SITE ASSESSMENT

Facility-specific Historical Site Assessments (HSAs) were conducted to understand the facility histories and related hazards. The assessments consisted of facility walkdowns, interviews, and document reviews, including review of the Historical Release Report (refer to the D&D Characterization Protocol, MAN-077-DDCP). Results were used to identify data gaps and needs, and to develop radiological characterization packages. Results of the facility-specific HSAs were documented in facility-specific *Historical Site Assessment Reports*. Refer to the RISS Characterization Files for copies of these HSARs. In summary, the HSARs identified a low potential for radiological hazards.

3 RADIOLOGICAL CHARACTERIZATION AND HAZARDS

The facility exteriors of the Westside buildings were characterized for radiological hazards. The methodology utilized for this PDS was authorized by DOE and CDPHE (refer to Attachment A). Radiological characterization was performed to define the nature and extent of radioactive materials that may be present on the facility exterior surfaces. Measurements were performed to evaluate the contaminants of concern. Based upon a review of historical and process knowledge, building walk-downs, and discussions with DOE and CDPHE, a Radiological Characterization Plan was developed during the planning phase that describes the survey requirements (refer to the RISS Characterization Project files for a copy of the plan). The facilities contained within the scope of this PDSR (i.e., the "western" facilities) are shown on the survey map contained in Attachment B (only the buildings with sample points on them were within the scope).

Radiological survey package EXT-B-001 was developed for the facility exteriors of the Westside buildings. The survey package was developed in accordance with Radiological Safety Practices (RSP) 16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation and Closure*. Survey Unit EXT-B-001 is a MARSSIM Class 3 area due to the low potential for radiological contamination on the facility exteriors. Total surface activity (TSA), removable surface activity (RSA), and scan measurements were collected in accordance with RSP 16.02 *Radiological Surveys of Surfaces and Structures*. Radiological survey data were verified, validated and evaluated in accordance with RSP 16.04, *Radiological Survey/Sample Data Analysis*. Quality control measures were implemented relative to the survey process in accordance with RSP 16.05, *Radiological Survey/Sample Quality Control*.

Two-hundred sixty-two (262) TSA measurements (247 biased and 15 QC) and two-hundred forty-seven (247) RSA measurements (247 biased) were performed; and a minimum 1m² scan around each TSA/RSA location and 10% scan of the associated exterior concrete pads and sidewalks (where applicable) of the facilities were scanned. The PDS data confirmed that these facility exteriors do not contain radiological contamination above the surface contamination guidelines provided in the PDSP. Radiological survey data, statistical analysis results, and survey locations are presented in Attachment B, *Radiological Data Summary and Survey Maps*. The radiological survey unit package is maintained in the RISS Characterization Project files. Isolation Control postings are not applicable for this survey unit.

4 CHEMICAL CHARACTERIZATION AND HAZARDS

Any necessary chemical characterization of the facility exterior surfaces (e.g., asbestos, beryllium, PCBs, RCRA/CERCLA constituents) will be evaluated and samples collected (as necessary) during the PDS of the interior surfaces of these facilities, therefore, no chemical characterization was performed as part of this PDS.

5 PHYSICAL HAZARDS

Physical hazards associated with these facilities consisted of those common in standard industrial environments and include hazards associated with energized systems, utilities, and trips and falls. The facilities have been relatively well maintained and are in good physical condition, and therefore, do not present hazards associated with building deterioration. Physical hazards are controlled by the Site Occupational Safety and Industrial Hygiene Program, which is based on OSHA regulations, DOE orders, and standard industry practices.

6 DATA QUALITY ASSESSMENT

Data used in making management decisions for decommissioning of these buildings, and consequent waste management, are of adequate quality to support the decisions documented in this report. The data presented in this report (Attachment B) were verified and validated relative to DOE quality requirements, applicable EPA guidance, and original DQOs of the project.

In summary, the Verification and Validation (V&V) process corroborates that the following elements of the characterization process are adequate:

- ◆ the *number* of samples and surveys;
- ◆ the *types* of samples and surveys;
- ◆ the sampling/survey process as implemented "in the field"; and,
- ◆ the laboratory analytical process, relative to accuracy and precision considerations.

Details of the DQA are provided in Attachment C, *Data Quality Assessment Detail*.

7 DECOMMISSIONING WASTE TYPES AND VOLUME ESTIMATES

The demolition and disposal of the Westside facilities will generate a variety of wastes. These different waste types and volumes will be detailed in the individual PDS reports for each of these facilities as part of the interior PDS efforts.

8 FACILITY CLASSIFICATION AND CONCLUSIONS

Based on the analysis of radiological and physical hazards, the facility exteriors of these Westside facilities meet the radiological PDSP unrestricted release criteria. The radiological PDS was performed in accordance with the DDCP and PDSP, except for the deviations outlined in the DOE and CDPHE approval letters in Attachment A. All PDSP radiological DQOs were met, and all data satisfied the radiological PDSP DQA criteria. Environmental media beneath and surrounding the facilities will be addressed at a future date using the Soil Disturbance Permit process and in compliance with RFCA.

9 REFERENCES

- DOE/RFEO, CDPHE, EPA, 1996. Rocky Flats Cleanup Agreement (RFCA), July 19, 1996.
- DOE Order 5400.5, "Radiation Protection of the Public and the Environment."
- EPA, 1994. "The Data Quality Objective Process," EPA QA/G-4.
- K-H, 1999. Decommissioning Program Plan, June 21, 1999.
- MAN-131-QAPM, *Kaiser-Hill Team Quality Assurance Program*, Rev. 1, November 1, 2001.
- MAN-076-FDPM, *Facility Disposition Program Manual*, Rev. 3, January 1, 2002.
- MAN-077-DDCP, *Decontamination and Decommissioning Characterization Protocol*, Rev. 3, July 15, 2002.
- MAN-127-PDSP, *Pre-Demolition Survey Plan for D&D Facilities*, Rev. 1, July 15, 2002.
- MARSSIM - Multi-Agency Radiation Survey and Site Investigation Manual, December 1997 (NUREG-1575, EPA 402-R-97-016).
- PRO-475-RSP-16.01, *Radiological Survey/Sampling Package Design, Preparation, Control, Implementation, and Closure*, Rev. 1, May 22, 2001.
- PRO-476-RSP-16.02, *Pre-Demolition (Final Status) Radiological Surveys of Surfaces and Structures*, Rev. 1, May 22, 2001.
- PRO-477-RSP-16.03, *Radiological Samples of Building Media*, Rev. 1, May 22, 2001.
- PRO-478-RSP-16.04, *Radiological Survey/Sample Data Analysis for Final Status Survey*, Rev. 1, May 22, 2001.
- PRO-479-RSP-16.05, *Radiological Survey/Sample Quality Control for Final Status Survey*, Rev. 1, May 22, 2001.
- PRO-563-ACPR, Asbestos Characterization Procedure, Revision 0, August 24, 1999.
- PRO-536-BCPR, Beryllium Characterization Procedure, Revision 0, August 24, 1999.
- RFETS, Environmental Waste Compliance Guidance #25, Management of Polychlorinated Biphenyls (PCBs) in Paint and Other Bulk Product Waste During Facility Disposition.
- RFETS, Environmental Waste Compliance Guidance #27, Lead-Based Paint (LBP) and Lead-Based Paint Debris Disposal.
- RFCA Standard Operation Protocol for Recycling Concrete, September 28, 1999.
- Various building-specific Historical Site Assessment Reports.*

ATTACHMENT A

DOE and CDPHE Approval Letters

CORRES. CONTROL
INCOMING LTR NO.

00867 RF02

DUE DATE
ACTION

Department of Energy

2002 DEC 17 P 1:39

CORRESPONDENCE

ROCKY FLATS FIELD OFFICE CONTROL
10808 HIGHWAY 93, UNIT A
GOLDEN, COLORADO 80403-8200

DEC 13 2002

02-DOE-01598

DIST.	LTR	ENC
BOGNAR, E.	X	X
CROCKETT, G.		
DECK, C. A.	X	X
DEGENHART, K.		
DIETER, T. J.		
DIETER, E. S. E.		
FERRERA, D. W.	X	X
FERRI, M. S.		
GERMAIN, A. L.		
GIACOMINI, J. J.		
ISOM, J. H.		
LINDSAY, D. C.	X	X
LONG, J. W.		
LYLE, J. L.		
MARTINEZ, L. A.	X	X
NAGEL, R. E.	X	X
NORTH, K.		
PARKER, A. M.	X	X
POWERS, K.		
RODGERS, A. D.		
SHELTON, D. C.	X	X
SPEARS, M. S.		
TRICE, K. D.		
TUOH, N. R.	X	X
WILLIAMS, J. L.		
GIBBS, F.	X	X
PARSONS, D.	X	X
BROOKS, L.	X	X

Mr. Steven H. Gunderson
Rocky Flats Cleanup Agreement Project Coordinator
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Mr. Timothy Rehder
Rocky Flats Project Manager
U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 500
Denver, Colorado 80202-2466

Dear Gentlemen:

Please find enclosed a Rocky Flats Environmental Technology Site (Site) Map depicting exterior building survey results and a matrix of exterior Pre-Demolition Survey (PDS) results by building.

This letter proposes a deviation to the Pre-Demolition Survey Plan (PDSP) for your approval. Site staff have discussed the changes to the PDSP discussed with the Colorado Department of Public Health and Environment staff and they have been agreed upon. The proposal is for the remaining Remediation, Industrial Decontamination and Decommissioning, and Site Services (RISS) facilities in the western portion of the Site as discussed in previous weekly Area Status Meetings held at the Site. This unified PDS strategy will provide an efficient means of characterizing the radiological hazards associated with the exterior surfaces of these facilities to meet the PDS requirements for these facilities prior to demolition or sale. The seven steps below detail the evaluation that was performed, the justification for the proposed strategy, and the proposed PDS characterization surveys that will be performed for the facilities of interest:

1. Historical events at the Site that could effect exterior PDS results have been evaluated. Such events are limited to the Building 771 fire (1957), Building 776 fire (1969), 903 Pad spills, and the Solar Pond Plume releases. Based on this evaluation, the RISS portion of the Site was divided into eastern and western sections, illustrated in the enclosed Site map. There is a significant likelihood that the eastern half of the Site could have been impacted by the historical events mentioned above; therefore, the eastern half of the Site has been excluded from this proposal. There is a low potential for impact from past historical events to the western half of the Site.

Reviewed for Addressee
Corres. Control RFP12/17/02 By *lg*

Ref. Ltr. #

DOE ORDER #

NONE

2. Previous PDS characterization data collected to date was evaluated. Data supports the above east and west division, except for the loading dock areas of buildings where radioactive waste has been transferred (e.g., Building 881, Building 444, Building 447). For any building, which has a past, current or future history of storing radioactive material, a PDS characterization will be performed at all loading docks, and personnel and equipment entrances and exits, as a part of that facility's interior PDS effort (e.g., 881, 444, 447, 460, 440, 664, 906, etc.).
3. All remaining RISS facilities on the western half of the enclosed Site map that have not undergone exterior PDS have been grouped as one Multi-agency Radiation Survey and Site Investigation Manual (MARSSIM) survey unit. The MARSSIM defines a survey unit as "a physical area consisting of structure or land areas of specified size and shape for which a separate decision will be made as to whether or not that area exceeds the release criterion." MARSSIM also states that the size and shape of the survey unit are based on factors such as the potential for contamination, the expected distribution of contamination, common history and characteristics of an area, and any physical boundaries at the Site.
4. Based on the process history and previous PDS characterization data collected to date, a single, unified Class 3 MARSSIM classification is justified for the entire western Site exterior facility survey unit herein defined. The MARSSIM does not specify a size limit for a Class 3 Survey Unit.
5. The source term for any potential contamination on the exterior facility surfaces would typically have come from an air plume deposition; therefore, a smaller number of sample points on each facility would be just as effective in identifying plume deposition as a larger number of sample points. The only case where this analogy would not hold true is in areas of the facility where localized spills may have occurred. All of these types of areas (e.g., loading dock areas, equipment and personnel entrance and exit points) will undergo additional PDS characterization as part of the interior PDS characterization effort.
6. Biased sample points have been determined for each remaining RISS facility on the western half of the enclosed Site map that has not already undergone exterior PDS. At least two points have been placed on each facility. All points will be taken at biased locations as determined by radiological engineering and operations personnel. Impacts from local Individual Hazardous Substance Sites shall be considered during measurement selection. At each survey point a total surface activity (TSA) measurement, a removable surface activity (RSA) measurement, and a one-meter scan will be performed in accordance with PDSP criteria. The TSA and RSA survey point will be taken at the highest location within the biased square meter scan area. The enclosed spreadsheet provides a detailed list of all the remaining buildings on the western half, pertinent information about each building, and the rationale for the amount of exterior PDS survey points for each building.
7. All data collected from the above PDS characterization effort will be detailed in a stand-alone PDS characterization report and submitted the Colorado Department of Public Health and Environment for review.

DEC 13 2002

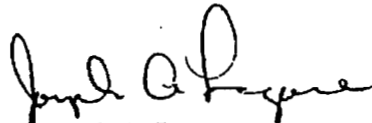
8. All building exteriors on the eastern half of the site (i.e., east of the dividing line) that have not yet been PDS characterized will undergo PDS prior to demolition using the site PDSP.

The portions of the PDSP from which the Site plans to deviate are:

1. Exceed the class 3 survey unit size of 1,000m², but the Site intends to increase the number of samples as allowed in MARSSIM.
2. The MARSSIM and the PDSP require random sampling, and at least two TSA/TSR measurements on small facilities and four on large will be biased.
3. Scan surveys will not be done to the 1-10 percent surface in class 3 survey units as only one meter areas around TSA/TSR sample will be scanned.

Unless you otherwise desire, this proposal will be implemented 14 days from the date of this letter. If you have any questions, do not hesitate to call Steve Tower at (303) 966-2133.

Sincerely,



Joseph A. Legare
Assistant Manager
for Environment and Stewardship

Enclosures

cc w/o Encls:

E. Schmitt, OOM, RFFO
S. Tower, AMP, RFFO
F. Gibbs, K-H RISS
D. Parsons, K-H RISS D&D
T. Rehder, EPA

cc w/Encl:

Administrative Record

51

Exterior PDS Facility List

Property Identifier	Property Name	Project	RISS Area	Facility Type - Anticipated	Bldg Type	Building SqFt Onsite	Classification	Year Acquired	Construction Type	Biased Sample Number (TSA, RSA, 1m Scan)	Sample Number Justification
115	Office and EOC Building	RISS	5	1	Admin	16,964	Industrial Facility	1987	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
116	Office Building	RISS	5	1	Admin	16,700	Industrial Facility	1991	Prefabricated/modular	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
119	WSLLC Fitness Center	RISS	5	1	Admin	11,200	Industrial Facility	1988	Light Metal Frame	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
119H	Heliport Pad	RISS	5	1	Industrial-Misc		Industrial Facility		Asphalt	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
120	West Access Guard Post	RISS	5	1	Admin	560	Industrial Facility	1986	Reinforced Concrete	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
120A	SPO Shelter (west of 120B) (Was 773S)	RISS	5	1	Industrial	120	Industrial Facility		Prefabricated/modular	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
120B	Vehicle Search Facility-West	RISS	5	1	Industrial	1,008	Industrial Facility	2002	Light Metal Frame	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
121	WSLLC Plant Protection	RISS	5	1	Admin	6,530	Industrial Facility	1953	Reinforced Concrete	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
122	Occupational Health - Medical	RISS	5	1	Admin	8,600	Industrial Facility	1953	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
122S	Emergency Power Switchgear/Shredder Plant	RISS	5	1	Industrial	222	Industrial Facility	1953	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
124	Water Treatment Plant	RISS	5	1	Admin-Industrial	8,303	Industrial Facility	1953	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
126	Source Calibration and Storage Building	RISS	5	1	Industrial	450	Radiological	1969	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
127	Emergency Generator Building (121)	RISS	5	1	Industrial	504	Industrial Facility	1973	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
128	Vehicle Shelter (Plant Protection)	RISS	5	1	Industrial	2,448	Industrial Facility	1980	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
129	Raw Water Strainer	RISS	5	1	Industrial	228	Non-Nuclear Low	1976	Reinforced Concrete	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.

Exterior PDS Facility List

Property Identifier	Property Name	Project	RISS Area	Facility Type - Anticipated	Bldg Type	Building SqFt Onsite	Classification	Year Acquired	Construction Type	Biased Sample Number (TSA, RSA, 1m Scan)	Sample Number Justification
130	Engineering Support Administration Building	RISS	5	1	Admin	44,661	Industrial Facility	1985	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
130 Cafeteria	B130 Cafeteria / Kitchen	RISS	5	1	Industrial	13,317	Industrial Facility	1985	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
130 Warehouse	B130 Warehouse	Support	5	1	Industrial	27,675	Industrial Facility	1985	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
131	Training	RISS	5	1	Admin	22,000	Industrial Facility	1987	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
223A	Environmental Restoration (ERM) Storage (constructed in 1975, not Site Real Property at that time)	Matl Stewardship	3	1	Industrial	1,972	Industrial Facility	1985	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
231	Process Waste Pump House - Low Level	371	3	2	Industrial	265	Radiological	1987	Light Metal Frame	4	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
302	Shoot House	RISS	3	1	Industrial	1,872	Industrial Facility	1997	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
303	Rifle Range	RISS	3	1	Industrial		Industrial Facility		Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
308	Compressor Building (Shooting Range)	RISS	3	1	Industrial	100	Industrial Facility		Prefabricated/modular	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
331	Fire Station (EGEN Supplied) & Vehicle Maintenance Garage & Offices	RISS	3	1	Industrial	23,540	Industrial Facility	1953	Masonry Exterior Walls	4	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
331F	Fuel Filling Station	RISS	3	1	Industrial	54	Industrial Facility		Light Metal Frame	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
331S	Storage	RISS	3	1	Industrial	563	NA	1975	Prefabricated/modular	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
372	Guard Post (Portal 2)	RISS	3	1	Industrial	520	Industrial Facility	1983	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
372A	Personnel Access Control 371 (PACS 2)	RISS	3	1	Industrial	1,800	Industrial Facility	1989	Reinforced Concrete	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.

Exterior PDS Facility List

Property Identifier	Property Name	Project	RISS Area	Facility Type - Anticipated	Bldg Type	Building SqFt Onsite	Classification	Year Acquired	Construction Type	Biased Sample Number (TSA, RSA, 1m Scan)	Sample Number Justification
375	Guard TowerT-4	RISS	3	1	Industrial	338	Industrial Facility	1983	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
439	Building 440 Operations	Matl Stewardsh ip	5	1	Admin-Industrial	5,140	Industrial Facility	1971	Light Metal Frame	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
440	Waste Storage / Shipping	Matl Stewardsh ip	5	2	Admin-Industrial	54,340	Nuclear Category 2	1971	Masonry Exterior Walls	6	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
441	Production Support Offices	RISS	3	2	Admin	17,790	Industrial Facility	1953	Masonry Exterior Walls	6	Low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean. All loading docks and building entrances will be fully characterized during interior PDS.
460	DOE (Administration)	Matl Stewardsh ip	5	1	Admin-Industrial	212,980	Industrial Facility	1985	Masonry Exterior Walls	4	Type 1 Building, very low potential based on process history; no known spills in, on, or near building, year aquired newer than 1970, surrounding building exterior PDS's clean. All loading docks and building entrances will be fully characterized during interior PDS.
462	Cooling Tower B460	Matl Stewardsh ip	5	1	Industrial	589	Industrial Facility		Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
549	Fitness Center	RISS	3	1	Industrial	1,920	Industrial Facility	1957	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
552	Bottle Gas Storage Building	Support	3	1	Industrial	4,170	Industrial Facility	1953	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
554	Warehouse Storage & Shipping Dock	RISS	3	1	Industrial	1,190	Industrial Facility	1953	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
556	Plasma Arc Training	RISS	3	1	Industrial	640	Industrial Facility	1963	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
569	Crate Counter	Matl Stewardsh ip	4	2	Admin-Industrial	7,620	Nuclear Category 2	1987	Prefabricated/modular	6	Low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean. All loading docks and building entrances will be fully characterized during interior PDS.
570	Filter Plenum - B569	Matl Stewardsh ip	4	2	Industrial	683	Industrial Facility	1985	Masonry Exterior Walls	4	Low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
664	Waste Storage and Shipping	Matl Stewardsh ip	5	2	Admin-Industrial	13,730	Nuclear Category 2	1972	Light Metal Frame	6	Low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean. All loading docks and building entrances will be fully characterized during interior PDS.

Exterior PDS Facility List

Property Identifier	Property Name	Project	RISS Area	Facility Type - Anticipated	Bldg Type	Building SqFt Onsite	Classification	Year Acquired	Construction Type	Biased Sample Number (TSA, RSA, 1m Scan)	Sample Number Justification
668	Drum Certification	Matl Stewardship	5	1	Industrial	1,540	Industrial Facility	1957	Unfinished Shell	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
681	Switchgear Building for 679/680	RISS	3	1	Industrial	2,302	Industrial Facility	1996	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; Aquired 1970 or newer, surrounding building exterior PDS's clean.
790	Radiation Calibration Labs	RISS	4	2	Admin-Industrial	6,768	Radiological	1991	Masonry Exterior Walls	6	Low potential based on process history, age of building, and surrounding building exterior PDS's clean.
869	Gas Meter House - PSCO Natural Gas Reducer	RISS	4	1	Industrial	420	Industrial Facility	1953	Masonry Exterior Walls	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
891	Ground Water Treatment Facility OU-1	RISS	5	1	Industrial	3,000	Non-nuclear low	1991	Light Metal Frame	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
906	Central Waste Storage	Matl Stewardship	4	2	Industrial	25,000	Nuclear Category 2	1994	Light Metal Frame	4	Low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean. All loading docks and building entrances will be fully characterized during interior PDS.
C331	Storage (Cargo Containers w/roof) aka 331C	RISS	3	1	Industrial	190	Industrial Facility	1975	Steel Framed	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
K750	Traffic Safety Office - east of 662.	RISS	1	1	Industrial	160	Industrial Facility		Prefabricated/modular	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
T115A	Trailer (Offices)	RISS	3	1	Admin	6,860	Industrial Facility	1989	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T115B	Fire Dispatch Quarters Trailer	RISS	3	1	Admin	756	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
T115C	Trailer (Offices)	RISS	3	1	Admin	3,000	Industrial Facility	1991	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T117A	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1991	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T119B	Trailer (WSLLC Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1991	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T121A	Trailer (Offices - Technical Security)	RISS	5	1	Admin	1,960	Industrial Facility	1985	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.

Exterior PDS Facility List

Property Identifier	Property Name	Project	RISS Area	Facility Type - Anticipated	Bldg Type	Building SqFt Onsite	Classification	Year Acquired	Construction Type	Biased Sample Number (TSA, RSA, 1m Scan)	Sample Number Justification
T122A	Mobile Decontamination System Trailer	RISS	5	2	Industrial	320	Industrial Facility	1997	Trailer (Personal Property)	4	Low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean. All loading docks and building entrances will be fully characterized during interior PDS.
T124A	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1991	Light Metal Trailer	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130A	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130B	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130 C	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130 D	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130E	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130F	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130 G	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130 H	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130I	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T130J	Trailer (Offices)	RISS	5	1	Admin	15,400	Industrial Facility	1990	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T131A	Trailer (Offices)	RISS	5	1	Admin	1,960	Industrial Facility	1991	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T303 D	Trailer (originally T120A)	RISS	3	1	Admin	1,960	Industrial Facility	1991	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T441A	Trailer (Offices)	RISS	3	1	Admin	2,080	Industrial Facility	1967	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.

Exterior PDS Facility List

Property Identifier	Property Name	Project	RISS Area	Facility Type - Anticipated	Bldg Type	Building SqFt Onsite	Classification	Year Acquired	Construction Type	Biased Sample Number (TSA, RSA, 1m Scan)	Sample Number Justification
T664A	Trailer (Offices)	Matl Stewardship	5	1	Admin	4,392	Industrial Facility	1991	Light Metal Trailer	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T664B	NDA Inspection Station	Matl Stewardship	5		Industrial		NA	2001	Trailer	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T664C	Mobile RTR, Office	Matl Stewardship	5		Industrial	320	NA	2001	Trailer	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T891B	Trailer (Offices)	RISS	5	1	Admin	980	Industrial Facility	1993	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T891C	Trailer (Offices)	RISS	4	1	Admin	3,920	Industrial Facility	1994	Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; year aquired newer than 1970, surrounding building exterior PDS's clean.
T900A	Trailer - OU-2 Trailer/Surface Water Treatment	RISS	5	1	Industrial	384	Non-nuclear low		Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
T900B	Trailer - OU-2 Trailer/Surface Water Treatment	RISS	5	1	Industrial	384	Non-nuclear low		Trailer (Personal Property)	2	Type 1 Building, very low potential based on process history; no known spills in, on, or near building; surrounding building exterior PDS's clean.
										188	Total Sample Number

CORRES. CONTROL
INCOMING LTR NO.

00059 RF03

DUE DATE
ACTION

Bill Owens, Governor

Douglas H. Benevento, Acting Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, ColoradoLaboratory and Radiation Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090<http://www.cdphe.state.co.us>

STATE OF COLORADO

Colorado Department
of Public Health
and Environment

DIST.	LTR	ENC
BOGNAR, E.	X	
CROCKETT, G.		
DECK, C. A.	X	
DEGENHART, K.		
DIETER, T. J.		
DIETERLE, S. E.		
FERRERA, D.W.	X	
FERRI, M.S.		
GERMAIN, A. L.		
GIACOMINI, J. J.		
ISOM, J. H.		
LINDSAY, D. C.		
LONG, J.W.		
LYLE, J.L.		
MARTINEZ, L.A.	X	
NAGEL, R. E.	X	
NORTH, K.	X	
PARKER, A.M.		
POWERS, K.		
RODGERS, A.D.		
SHELTON, D.C.	X	
SPEARS, M.S.		
TRICE, K.D.		
TUOH, N.B.		
WILLIAMS, J. L.		
PARSONS, D.	X	
GIBBS, F.	X	
BUTLER, L.	X	

January 27, 2003

Mr. Richard DiSalvo

Acting Assistant Manager for Environment and Stewardship

U.S. Department of Energy, Rocky Flats Field Office

10808 Highway 93, Unit A

Golden, CO 80403-8200

RE: Proposed Deviations From The Pre-Demolition Survey Plan (PDSP)

Dear Mr. DiSalvo:

The Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division has reviewed the proposed deviations from the PDSP, wherein all of the exterior surfaces (excluding the loading docks and other specific areas) of the remaining buildings on the "western" portion of Rocky Flats Environmental Technology Site (Site) would be identified as a single unit for PDS radiological characterization as discussed in Mr. Legare's letter dated December 13, 2002. The Division is in agreement with the proposed deviations with the following concerns and clarifications:

- 1) Considering the broad scope of this deviation and the limited historical information provided with this proposal, the Division retains the right to request additional radiological characterization for any facility where additional historical information or recent events might identify specific concerns not currently recognized or addressed in this proposal. Any request for additional surveys, measurements, or samples should be addressed utilizing the consultative process.
- 2) Considering that this proposal includes some proposed Type 2 facilities, it needs to be recognized that these facilities are required to follow the characterization as outlined in the Reconnaissance Level Characterization Plan (RLCP) rather than the PDSP. All facilities at the Site are required to be properly characterized. The initially identified Type 1 facilities are supposed to be characterized utilizing the PDSP requirements, and the initially identified Type 2 and 3 facilities are to be characterized utilizing the RLCP requirements. This would seem to indicate that the proposed Type 2 facilities should be included in a unit separate from the proposed Type 1 facilities. As such, this should be recognized as a deviation from the RLCP (which requires a minimum of 30 uniformly distributed plus biased measurements) for these possible Type 2 facilities, as well as, the PDSP for the Type 1 facilities. However, the Division recognizes that, based on the information provided, the exterior of these proposed Type 2

COR. CONTROL	X	X
ADMIN. RECORD	X	
PATS/130		

Reviewed for Addressee
Corres. Control RFP1/30/03
Date By

Ref. Ltr. #

DOE ORDER #

5400-1

facilities should not necessarily pose a substantially greater risk of being contaminated than the proposed Type 1 facilities in the "western" portion of the Site. Therefore, and considering the additional sampling as proposed for the possible Type 2 facilities included in this proposal, the Division believes it to be reasonable to include these Type 2 facilities in this proposed unit. The Division also agrees with this apparent deviation from the RLCP, and to allow the utilization of the results of this investigation in lieu of a separate investigation of the exterior of the proposed Type 2 facilities.

If you have any questions regarding this correspondence please contact me at (303) 692-3367 or David Kruchek at (303) 692-3328.

Sincerely,



Steven H. Gunderson
RFCA Project Coordinator

cc: Steve Tower, DOE
Duane Parsons, KH
Dave Shelton, KH

Tim Rehder, EPA
Frank Gibbs, KH
Administrative Records Building T130G

ATTACHMENT B

Radiological Data Summaries and Survey Maps

SURVEY UNIT EXT-B-001
RADIOLOGICAL DATA SUMMARY - PDS

Survey Unit Description: Building Exteriors - RISS West

EXT-B-001
PDS Data Summary

Total Surface Activity Measurements

	247	247
	Number Required	Number Obtained
MIN	-14.7	dpm/100 cm ²
MAX	98.8	dpm/100 cm ²
MEAN	34.8	dpm/100 cm ²
STD DEV	24.7	dpm/100 cm ²
TRANSURANIC DCGL _w	100	dpm/100 cm ²

Removable Activity Measurements

	247	247
	Number Required	Number Obtained
MIN	0.0	dpm/100 cm ²
MAX	6.1	dpm/100 cm ²
MEAN	0.6	dpm/100 cm ²
STD DEV	1.1	dpm/100 cm ²
TRANSURANIC DCGL _w	20	dpm/100 cm ²

25

EXT-B-001
TSA Data Summary

New location #	RCT/ Instrument	Background cpm	Gross cpm	dpm/ 100cm ²	Sample Location
1	20	6.7	20.0	75.3	former B111 Cement pad outside
2	7	6.0	11.3	31.8	B115 E. side between window 5-6
3	7	4.7	6.7	8.8	B115 East dock cement
4*	7	3.3	22.8	89.3	B115 North side cement by HVAC
5	78	1.3	6.7	8.8	B115 Sidewalk main entrance
6	7	6.7	15.3	51.8	B115 west side under window (6) n-s
7	6	5.3	11.3	31.8	B116 Cement dock
8	1	8.0	17.3	61.8	B116 Cement door 1 (s)
9	1	6.0	18.0	65.3	B116 Cement door 2 (w)
10	6	5.3	8.0	15.3	B116 East front door cement
11	6	6.0	10.0	25.3	B116 metal roof
12	6	5.3	14.0	45.3	B116 metal roof
13	6	6.7	10.0	25.3	B116 North side by door
14	6	7.3	8.0	15.3	B116 South dock wall (inner)
15	6	5.3	20.7	78.8	T117A Cement east side door
16	6	7.3	18.7	68.8	T117A north side center
17	6	4.0	15.3	51.8	T117A SE corner
18	1	4.7	15.3	51.8	B119 North side
19	1	5.3	10.7	28.8	B119 South side door
20	1	2.7	18.7	68.8	T119B North west corner
21	1	6.7	15.3	51.8	T119B South middle door by stairs
22	74	0.0	9.3	21.8	B120 Cement on guard pad west gate
23	74	2.0	9.3	21.8	B120 Cement on guard pad west gate
24	74	4.7	4.7	-1.2	B120 Waiting area outside west gate phone
25	74	4.7	14.7	48.8	B120 West guard shack south wall main bldg.
26	74	4.0	5.3	1.8	B120 West guard shack west wall main bldg.
27	74	6.7	4.7	-1.2	B120B/A east wall (west gate)
28	13	4.3	13.3	41.8	B121 Door 1
29	13	7.3	12.0	35.3	B121 door 3 cement pad (doorway)
30	13	6.7	20.7	78.8	B122 Cement by door 7
31	13	5.3	12.7	38.8	B122 Door 6D
32	13	6.7	10.7	28.8	B122 North side
33**	13	8.0	38.7	0.0	B124 Cement holding ponds
34**	13	6.7	40.0	0.0	B124 Cement retaining ponds
35	13	6.7	14.0	45.3	B124 East side
36*	13	2.7	13.3	41.8	B124 Roof metal covered (taped)
37	13	8.0	24.7	98.8	B125 Cement foundation
38	13	6.7	6.7	8.8	B125 Cement foundation
39	1	7.3	19.3	71.8	B126 North side
40	1	7.3	20.0	75.3	B126 South side
41	13	4.7	15.3	51.8	B127 north end
42	13	5.3	12.7	38.8	B127 Rollup door south side
43	13	6.7	11.3	31.8	B127 south end by intake
44	13	7.3	18.0	65.3	B128 Personnel door south west side
45	20	7.3	13.3	41.8	B128 Roof west end
46	20	8.0	12.7	38.8	B128 Roof east end
47	13	8.0	12.7	38.8	B129 East side
48	30	4.0	8.7	18.8	B130 café South side
49	30	6.0	10.0	25.3	B130 café West side
50	31	4.0	14.7	48.8	B130 Concrete northwest door dock
51	31	6.7	13.3	41.8	B130 Concrete southeast door dock area
52	30	2.7	9.3	21.8	B130 East side
53	31	2.0	11.3	31.8	B130 East side dock cement
54	36	3.3	20.7	78.8	B130 East side roof
55	31	6.0	18.0	65.3	B130 North side
56	36	4.7	13.3	41.8	B130 North side roof café
57	36	2.7	16.0	55.3	B130 North side roof warehouse
58	31	6.7	13.3	41.8	B130 Northwest corner concrete retaining wall
59	36	4.7	14.7	48.8	B130 South side roof café
60	36	4.0	16.7	58.8	B130 South side roof warehouse
61	30	6.7	11.3	31.8	B130 Warehouse east side
62	30	6.7	10.0	25.3	B130 Warehouse South side
63	30	6.0	14.0	45.3	B130 West side
64	31	6.0	9.3	21.8	B130 West side
65	36	4.3	18.7	68.8	B130 West side roof (office area section)
66	31	7.3	8.7	18.8	B131 North side
67	31	2.7	12.7	38.8	B131 South side
68	31	4.7	6.0	5.3	T131A North side
69	55	7.3	5.3	1.8	B223A Cement wall by rollup doors
70	56	6.7	16.0	55.3	B223A South wall
71	77	4.0	14.7	48.8	B302 Cement walkway
72	77	3.3	14.0	45.3	B302 east wall
73	77	4.7	16.7	58.8	B302 west wall
74	77	6.0	8.7	18.8	B303 North post firing range
75	77	4.7	8.0	15.3	B303 Steel post firing range south
76	77	2.7	6.0	5.3	B308 Firing Range Generator Shed
77	77	2.0	4.7	-1.2	B308 Firing Range Generator Shed
78	50	2.7	18.7	68.8	B331 FD Door 10 cement

EXT-B-001
TSA Data Summary

New location #	RCT/ Instrument	Background cpm	Gross cpm	dpm/ 100cm ²	Sample Location
79	50	2.7	22.0	85.3	B331 FD Door 12 cement
80	50	1.3	10.0	25.3	B331 FD Roof top
81	50	1.3	10.0	25.3	B331 FD Roof top
82	78	2.7	4.7	-1.2	B331F Driveway in front
83	45	8.0	12.0	35.3	B331FD South side bay door 12
84	45	2.3	5.3	1.8	B331FD South side door 9
85	50	0.7	13.3	41.8	B331G Cement east side
86	45	4.0	8.0	15.3	B331G North side door 4T
87	50	4.7	6.7	8.8	B331G North wall garage door
88	50	4.0	10.0	25.3	B331G Roof top
89	50	5.3	6.7	8.8	B331G Roof top by roof drain
90	45	8.0	8.0	15.3	B331G West garage door
91	50	0.7	4.7	-1.2	B331S North east corner
92	50	1.3	3.3	-8.2	B331S steel shed with asphalt floor
93	60	4.7	5.3	1.8	B372 Old guard post east wall
94	60	4.0	12.0	35.3	B372 Old guard post east wall
95	61	1.3	10.0	25.3	B372A Cement walk at door 1
96	61	2.0	10.0	25.3	B372A North west corner
97	61	2.7	2.0	-14.7	B372A South end
98	78	3.3	10.7	28.8	B375 guard tower North west wall
99	78	2.0	10.0	25.3	B375 guard tower East wall
100	43	4.7	7.3	11.8	B439 South side
101	43	4.7	11.3	31.8	B439 West side door 1
102	43	5.3	16.7	58.8	B440 Cement pad under cooling tower 462
103	43	4.0	10.0	25.3	B440 Door 14 west side
104	43	6.0	12.7	38.8	B440 East door 6
105	43	4.0	6.7	8.8	B440 East side door 27T
106	43	4.7	14.0	45.3	B440 north side door 23D
107	43	6.7	7.3	11.8	B440 Outside door 7
108	43	5.3	10.7	28.8	B440 South side door 29T
109	43	4.7	18.7	68.8	B440 South west side of cooling tower 462
110	78	3.3	4.7	-1.2	B441 Walkway outside on central Ave.
111	78	1.3	6.0	5.3	B441 Walkway outside on central Ave.
112	43	8.0	4.0	-4.7	B460 Cement dock north side dock 6D
113	43	8.0	13.3	41.8	B460 East side dock area
114	43	3.3	14.7	48.8	B460 South side by door 3
115	43	4.7	13.3	41.8	B460 West side door 4
116	55	1.3	7.3	11.8	B549 Cement by door 2
117	56	1.3	14.0	45.3	B549 Cement by door 3T
118	56	5.3	16.0	55.3	B552 Cement dock
119	55	2.7	10.7	28.8	B552 Cement dock see 245/246
120	56	4.0	8.7	18.8	B552 East wall
121	55	5.3	18.0	65.3	B552 South wall
122	60	4.7	3.3	-8.2	B554 Cement foundation wall
123	60	4.0	4.0	-4.7	B554 Dock door 3D south
124	56	1.3	16.0	55.3	B556 South side cement footer
125	55	5.3	12.7	38.8	B556 South side
126	59	8.0	4.0	-4.7	B569 By door 4
127	57	6.7	7.3	11.8	B569 Cement foundation east wall
128	57	4.0	8.7	18.8	B569 Dock door (east)
129	59	4.0	12.0	35.3	B569 North west wall
130	59	5.3	7.3	11.8	B569 South wall
131	59	4.7	9.3	21.8	B569By door 5
132	66	6.7	22.0	85.3	B570 North east wall
133	66	4.0	17.3	61.8	B570 South west wall
134	77	2.7	10.0	25.3	B664 Cement foundation south side
135	44	5.3	8.7	18.8	B664 East wall door 2
136	44	6.0	18.7	68.8	B664 North wall
137	45	8.0	18.7	68.8	B664 South east corner door 5T
138	45	1.3	9.3	21.8	B664 South west corner
139	45	5.3	17.3	61.8	B664 South west corner wall door 8D
140	45	7.3	17.3	61.8	B664 West wall north corner
141	45	6.7	17.3	61.8	T664B East wall
142	45	6.7	19.3	71.8	T664B South wall
143	44	7.3	12.7	38.8	B668 East side Door 1
144	43	6.0	11.3	31.8	B668 South side
145	66	3.0	19.0	70.3	B681 Cement wall by rollup door
146	66	4.0	14.0	45.3	B681 South wall SE corner
147	57	5.3	16.0	55.3	B706 Cement sidewalk north side
148	66	8.0	16.0	55.3	B711 North side
149	66	4.0	7.3	11.8	B711 South side
150	71	6.0	14.0	45.3	B718 Cement walkway
151	74	4.7	8.0	15.3	B790 By main door on tile
152	74	4.7	9.3	21.8	B790 Dock cement
153	74	2.7	10.0	25.3	B790 Door 108
154	74	1.3	10.0	25.3	B790 Door 116
155	74	7.3	4.0	-4.7	B790 Foundation north side
156	74	6.0	10.0	25.3	B790 North wall

EXT-B-001
TSA Data Summary

New location #	RCT/ Instrument	Background cpm	Gross cpm	dpm/ 100cm ²	Sample Location
157	74	4.0	11.3	31.8	B790 SW wall
158	74	6.7	10.0	25.3	B790 West wall
159	74	5.3	13.3	41.8	B869 door 1
160	74	7.3	12.7	38.8	B869 east wall
161	73	5.3	24.0	95.3	B869 Pit outside south side
162	74	0.7	20.0	75.3	B869 Trap door on west side
163	45	6.7	12.7	38.8	B891 North side (northwest corner)
164	45	7.3	8.7	18.8	B891 North side cement
165	45	3.3	24.0	95.3	B891 Roof south side midway
166	45	6.7	20.0	75.3	B891 South side (southeast corner)
167	45	7.3	24.7	98.8	B891 South west roof
168	45	4.0	12.7	38.8	B891 Tank retaining wall cement
169	46	4.0	9.3	21.8	B891 Tank retaining wall cement
170	45	4.0	7.3	11.8	B891 Tank retaining wall cement
171	45	4.0	20.7	78.8	B891 Top of effluent tank T207
172	82	7.3	20.3	76.8	B906 Cement pad at door 3
173	82	4.0	16.0	55.3	B906 Cement pad door 5
174	82	4.0	20.7	78.8	B906 Cement pad for AC
175	82	7.3	9.3	21.8	B906 Door 3 North side
176	82	4.7	10.0	25.3	B906 Door 5 east side
177	82	4.7	7.3	11.8	B906 South wall
178	82	1.3	14.0	45.3	B906 West wall by stairs
179	74	5.3	10.7	28.8	Bldg. 120B east wall (west gate)
180	74	5.3	4.7	-1.2	Bldg. 120B south wall (west gate)
181	45	6.0	9.3	21.8	C331 North west corner
182	45	5.3	10.0	25.3	C331 South side
183	28	6.0	12.7	38.8	East side T130E
184***	13	6.7	27.3	98.1	Heli pad (cement) E of landing site
185***	13	5.3	25.3	89.3	Heli pad (cement) E of landing site
186**	13	6.7	32.0	0.0	heli pad Cement east
187	68	4.0	11.3	31.8	K750 East wall
188	68	2.7	7.3	11.8	K750 West wall
189	74	1.3	20.7	78.8	Old 120A Cement pad by rail cars north
190*	74	2.7	18.7	62.0	Old 120A Cement pad by rail cars south
191	78	2.7	10.0	25.3	PACS 2 Sidewalk in front
192	20	6.7	19.3	71.8	T115A East side
193	20	6.0	16.7	58.8	T115A West side
194	45	4.0	6.7	8.8	T115B North door
195	20	7.3	14.0	45.3	T115B north end
196	20	2.7	13.3	41.8	T115B south end
197	45	7.3	10.0	25.3	T115B West of south door
198	20	6.0	12.7	38.8	T115C north east corner
199	20	4.7	10.7	28.8	T115C south west corner under window
200*	13	6.0	12.0	35.3	T122A Back door decon trailer "taped"
201	13	2.7	12.7	38.8	T122A Door decon trailer (entrance)
202	13	5.3	12.7	38.8	T124A north side middle (metal)
203	13	5.3	13.3	41.8	T124A south side middle (metal)
204	13	6.0	12.0	35.3	T124A Wood dock north side
205	24	2.0	4.7	-1.2	T130A north east dock
206	37	4.0	12.0	35.3	T130A North side roof
207	24	6.0	16.7	58.8	T130A South center door
208	24	3.3	5.3	1.8	T130B North east dock
209	37	4.0	16.7	58.8	T130B West side roof
210	24	2.7	6.0	5.3	T130B West south west dock
211	28	3.3	9.3	21.8	T130C East side
212	28	4.3	9.3	21.8	T130C West side
213	28	7.3	8.7	18.8	T130D North side
214	28	4.7	8.7	18.8	T130D South side
215	28	8.0	9.3	21.8	T130E West side
216	37	2.7	15.3	51.8	T130E West side roof
217	28	6.7	6.0	5.3	T130F North side
218	28	4.7	12.7	38.8	T130F South side
219	28	4.7	12.7	38.8	T130G East side
220	28	3.3	6.7	8.8	T130G West side
221	37	4.7	14.7	48.8	T130H North side roof
222	24	6.7	6.0	5.3	T130H North west door
223	24	6.7	10.7	28.8	T130H S center dock
224	24	2.7	6.7	8.8	T130I center door N/S
225	24	7.3	11.3	31.8	T130I SE door
226	22	2.7	3.3	-8.2	T130J N/S middle door
227	22	2.7	6.0	5.3	T130J SE corner dock
228	37	6.7	13.3	41.8	T130J South side roof
229	31	6.7	10.7	28.8	T131A East side
230	31	7.3	10.0	25.3	T131A West side
231	77	5.3	9.3	21.8	T303D east wall
232	77	6.0	9.3	21.8	T303D west wall
233	77	2.7	12.0	35.3	T664A cement walkway
234	44	4.7	6.0	5.3	T664A East side door 1

28

EXT-B-001
TSA Data Summary

New location #	RCT/ Instrument	Background cpm	Gross cpm	dpm/ 100cm ²	Sample Location
235	44	4.0	6.7	8.8	T664A North wall
236	45	6.4	16.3	56.8	T664C East end (back of trailer)
237	45	6.7	7.3	11.8	T664C South side of trailer
238	45	4.0	21.3	81.8	T891C North side cement loading dock
239	46	4.0	6.7	8.8	T891C North side
240	45	7.3	9.3	21.8	T891C Roof
241	45	7.3	8.0	15.3	T891C Roof
242	45	5.3	11.3	31.8	T891C South side
243	45	3.3	6.0	5.3	T891C South side dock
244	58	7.3	12.0	35.3	VV013 Steel shed over valve vault
245	58	6.0	12.0	35.3	VV013 Steel shed over valve vault
246	58	7.3	10.7	28.8	VV013 Steel shed over valve vault
247	58	7.8	8.7	18.8	VV013 Steel shed over valve vault
				4.9	
				24.7	Sample LAB Average
				MIN	-14.7
				MAX	98.8
				MEAN	34.8
				SD	24.7
				Transuranic DCGL _w	100

72 QC	78	4.0	14.7	73.5	
236 QC	78	3.3	4.0	20.0	
135 QC	78	4.3	4.7	23.5	
242 QC	78	4.0	6.0	30.0	
224 QC	78	0.7	2.7	13.5	
211 QC	79	6.3	6.0	30.0	
63 QC	79	6.0	6.0	30.0	
204 QC	79	6.7	14.7	73.5	
116 QC	80	4.7	10.7	53.5	
84 QC	80	8.0	8.7	43.5	
166 QC	79	6.7	14.0	70.0	
96 QC	80	7.3	18.0	90.0	
207 QC	82	6.7	9.3	46.5	
223 QC	82	3.3	4.0	20.0	
225 QC	82	6.0	10.0	50.0	
				44.5	QC LAB Average
				MIN	13.5
				MAX	90.0
				MEAN	44.5
				Transuranic DCGL _w	100

* - The initial Sample Net Activity for the locations listed below exceeded the transuranic DCGL_w limit of 100.0 dpm/100cm². These locations were re-surveyed after a decay period. Re-survey results are reported in the table above. No further investigation is required.

Location	Initial Sample Net Activity dpm/100cm ²	Reported Sample Net Activity dpm/100cm ²	
4	118.8	89.3	B115 North side cement by HVAC
36	175.3	41.8	B124 Roof metal covered
190	127.8	62.0	Old 120A Cement pad by rail cars south
200	145.8	35.3	T122A Back door decon trailer

** - The initial Sample Net Activity for the locations listed below exceeded the transuranic DCGL_w limit of 100.0 dpm/100cm². These concrete surface locations were sampled and analyzed using the Canberra ISOCS gamma spectroscopy system. No transuranic isotopes were detected. The concrete surface activity was determined to be from uranium and naturally occurring isotopes. The Sample Net Activity for this location is below the uranium DCGL_w limits (5000 dpm/100cm²). All survey results are less than the applicable DCGLs, therefore, no further investigation is required. On this basis, the transuranic value for these locations is reported as zero (0) net activity in the TSA Data Summary.

Location	Initial Sample Net Activity dpm/100cm ²	Reported Sample Net Activity dpm/100cm ²	
33	168.8	0	B124 Cement holding ponds
34	175.3	0	B124 Cement retaining ponds
186	118.7	0	heli pad Cement east

*** - For locations 184 and 185 the actual efficiency of 0.228 was used. An instrument efficiency of 0.20 was used for the other calculations.

EXT-B-001
RSA Data Summary

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
1	26	1	1.5
2	11	0	0.0
3	11	1	1.5
4	12	0	0.0
5	81	1	1.5
6	11	0	0.0
7	12	1	1.5
8	5	0	0.0
9	5	0	0.0
10	11	0	0.0
11	11	1	1.5
12	12	1	1.5
13	12	0	0.0
14	11	0	0.0
15	12	0	0.0
16	11	2	3.0
17	12	1	1.5
18	5	1	1.5
19	5	0	0.0
20	5	1	1.5
21	5	0	0.0
22	76	1	1.5
23	75	0	0.0
24	76	0	0.0
25	75	0	0.0
26	76	1	1.5
27	75	0	0.0
28	18	1	1.5
29	19	1	1.5
30	18	0	0.0
31	18	0	0.0
32	19	0	0.0
33	19	0	0.0
34	19	0	0.0
35	19	0	0.0
36	18	0	0.0
37	18	0	0.0
38	19	0	0.0
39	5	1	1.5
40	5	0	0.0
41	19	1	1.5
42	18	1	1.5
43	19	0	0.0
44	26	0	0.0
45	26	1	1.5
46	26	0	0.0
47	18	2	3.0
48	34	0	0.0
49	34	0	0.0
50	34	0	0.0
51	35	0	0.0
52	34	0	0.0
53	34	0	0.0
54	39	0	0.0
55	35	0	0.0
56	39	1	1.5
57	38	0	0.0
58	35	1	1.5
59	38	0	0.0
60	39	0	0.0
61	35	0	0.0
62	35	0	0.0
63	35	2	3.0
64	34	0	0.0

EXT-B-001
RSA Data Summary

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
65	38	0	0.0
66	35	0	0.0
67	34	0	0.0
68	35	0	0.0
69	62	1	1.5
70	63	0	0.0
71	81	0	0.0
72	81	2	3.0
73	81	1	1.5
74	81	0	0.0
75	81	0	0.0
76	81	1	1.5
77	81	0	0.0
78	51	0	0.0
79	52	0	0.0
80	51	0	0.0
81	52	0	0.0
82	81	0	0.0
83	51	0	0.0
84	52	0	0.0
85	54	1	1.5
86	53	0	0.0
87	53	0	0.0
88	53	1	1.5
89	54	0	0.0
90	54	0	0.0
91	52	1	1.5
92	51	3	4.5
93	62	1	1.5
94	63	0	0.0
95	62	0	0.0
96	65	1	1.5
97	64	0	0.0
98	81	0	0.0
99	81	0	0.0
100	54	0	0.0
101	53	1	1.5
102	52	1	1.5
103	53	1	1.5
104	51	0	0.0
105	51	0	0.0
106	54	2	3.0
107	52	0	0.0
108	54	0	0.0
109	53	0	0.0
110	81	0	0.0
111	81	0	0.0
112	51	3	4.5
113	53	0	0.0
114	51	1	1.5
115	54	0	0.0
116	62	3	4.5
117	63	0	0.0
118	65	0	0.0
119	64	1	1.5
120	64	0	0.0
121	65	0	0.0
122	64	0	0.0
123	65	1	1.5
124	63	0	0.0
125	62	1	1.5
126	64	1	1.5
127	65	0	0.0
128	64	0	0.0

EXT-B-001
RSA Data Summary

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
129	62	1	1.5
130	65	0	0.0
131	63	0	0.0
132	75	0	0.0
133	76	1	1.5
134	81	0	0.0
135	53	0	0.0
136	54	0	0.0
137	53	0	0.0
138	52	0	0.0
139	52	1	1.5
140	51	1	1.5
141	54	0	0.0
142	51	0	0.0
143	51	1	1.5
144	54	0	0.0
145	75	0	0.0
146	76	0	0.0
147	63	0	0.0
148	75	0	0.0
149	76	0	0.0
150	75	1	1.5
151	76	0	0.0
152	76	0	0.0
153	75	1	1.5
154	75	0	0.0
155	75	0	0.0
156	76	1	1.5
157	76	0	0.0
158	75	0	0.0
159	75	0	0.0
160	76	0	0.0
161	76	0	0.0
162	75	0	0.0
163	52	0	0.0
164	53	0	0.0
165	53	1	1.5
166	51	1	1.5
167	52	4	6.1
168	52	0	0.0
169	53	0	0.0
170	54	0	0.0
171	51	2	3.0
172	83	0	0.0
173	83	0	0.0
174	83	0	0.0
175	83	1	1.5
176	83	0	0.0
177	83	0	0.0
178	83	0	0.0
179	76	0	0.0
180	75	0	0.0
181	52	0	0.0
182	51	1	1.5
183	29	1	1.5
184	18	0	0.0
185	19	0	0.0
186	19	2	3.0
187	76	1	1.5
188	75	0	0.0
189	75	0	0.0
190	76	0	0.0
191	81	0	0.0
192	26	0	0.0

EXT-B-001
RSA Data Summary

Sample Location Number	Instrument ID#	Gross Counts (cpm)	Net Activity (dpm/100 cm ²)
193	26	0	0.0
194	54	0	0.0
195	26	1	1.5
196	26	0	0.0
197	53	2	3.0
198	26	1	1.5
199	26	0	0.0
200	18	0	0.0
201	19	1	1.5
202	18	0	0.0
203	19	1	1.5
204	18	0	0.0
205	26	0	0.0
206	38	0	0.0
207	26	0	0.0
208	26	0	0.0
209	38	1	1.5
210	26	0	0.0
211	29	0	0.0
212	29	0	0.0
213	29	1	1.5
214	29	0	0.0
215	29	2	3.0
216	39	1	1.5
217	29	3	4.5
218	29	2	3.0
219	29	0	0.0
220	29	1	1.5
221	38	0	0.0
222	26	0	0.0
223	26	0	0.0
224	26	0	0.0
225	26	0	0.0
226	26	1	1.5
227	26	0	0.0
228	39	1	1.5
229	35	1	1.5
230	34	1	1.5
231	81	1	1.5
232	81	0	0.0
233	81	0	0.0
234	51	0	0.0
235	54	0	0.0
236	52	0	0.0
237	53	2	3.0
238	54	0	0.0
239	51	1	1.5
240	51	0	0.0
241	52	1	1.5
242	52	1	1.5
243	53	0	0.0
244	62	0	0.0
245	63	0	0.0
246	64	0	0.0
247	65	0	0.0
		MIN	0.0
		MAX	6.1
		MEAN	0.6
		SD	1.1
		Transuranic DCGL _w	20

EXT-B-001
Media Sample Results

LOCATION DESCRIPTION	SAMPLE LOCATION NUMBER	SITE SAMPLE ID	NUCLIDE	pCi/g (2)	MDA (pCi/g)	WEIGHT (g)	SURFACE AREA (in ²)	INDIVIDUAL NUCLIDE (dpm/100cm ²) (3)	ESTIMATED MDA (dpm/100cm ²) (4)	URANIUM TOTAL (dpm/100cm ²)	TRANSURANIC TOTAL (dpm/100cm ²)
Exterior concrete	33, 34, 186	03S0186.004.001	U-234	0.775	0.185	94.0	24.5	102	24		
			U-235	0.109	0.034			14	5		
			U-238	0.775	0.169			102	22	219.0	
			Pu-239	0.000	0.230			0	30		
			Pu-240	0.000	0.032			0	4		0.0

- (1) Concrete surface samples collected were analyzed as grouped composites using the Canberra ISOCS Gamma Spectroscopy system.
- (2) Critical Level test criterion were utilized in this analysis. If the net peak area was less than the L_c (critical level), then a "not detected" or "zero" decision was made. The L_c value is always less than the applicable MDA, but greater than zero.
- (3) Individual nuclide dpm/100 cm² conversion is conservatively based on the composite sample weight. This assumption presumes that the total sample activity from composited samples is located at one, single sample location. This methodology ensures that no single sample location exceeds the applicable DCGL_w.
- (4) Estimated MDA dpm/100 cm² conversion is conservatively based on the composite sample weight.

ATTACHMENT C

Data Quality Assessment (DQA) Detail

DATA QUALITY ASSESSMENT (DQA)

VERIFICATION & VALIDATION OF RESULTS

V&V of the data confirm that appropriate quality controls are implemented throughout the sampling and analysis process, and that any substandard controls result in qualification or rejection of the data in question. The required quality controls and their implementation are summarized in a tabular, checklist format for each category of data – specifically, radiological surveys.

DQA criteria and results are provided in a tabular format for each suite of surveys performed; the radiological survey assessment is provided in Table C-1. A data completeness summary for all results is given in Table C-2.

All relevant Quality records supporting this report are maintained in the RISS Characterization Project Files. This report will be submitted to the CERCLA Administrative Record for permanent storage within 30 days of approval by the Regulators. All radiological data are organized into Survey Packages, which correlate to unique (MARSSIM) Survey Units.

Beta/gamma survey designs were not implemented for these buildings based on the conservatism of the transuranic limits used as DCGLs in the unrestricted release decision process. Survey designs were implemented based on the transuranic limits used as DCGLs in the unrestricted release decision process. All survey results were evaluated against, and were less than the Transuranic DCGL_w (100 dpm/100cm²) and the Uranium DCGL_w (5,000 dpm/100cm²) unrestricted release limits. Media samples were taken and analyzed by ISOCS Canberra gamma spectroscopy. Transuranic isotope activity and Uranium and/or other naturally occurring isotope activity were evaluated against, and were less than the Transuranic DCGL_w (100 dpm/100cm²) and the Uranium DCGL_w (5,000 dpm/100cm²) unrestricted release limits. Media results were converted to dpm/100cm² using the Media Conversion Table, evaluated against the transuranic and uranium DCGL limits, and are the values reported in the Radiological TSA Data Summary in support of the unrestricted release decision process.

Consistent with EPA's G-4 DQO process, the radiological survey design was optimized by checking actual measurement results (acquired during pre-demolition surveys) against model output with original estimates. Use of actual sample/survey (result) variances in the MARSSIM DQO model confirms that an adequate number of surveys were acquired.

SUMMARY

In summary, the data presented in this report have been verified and validated relative to the quality requirements and project decisions as stated in the original DQOs. All data are useable based on qualifications stated herein and are considered satisfactory without qualification. All media surveyed and sampled yielded results less than their associated action levels and with acceptable certainties, except for the below anomalous conditions:

- Initial sample net activity at locations 4, 36, 190 and 200 (118.8 dpm/100cm², 175.3 dpm/100cm², 127.8 dpm/100cm² and 145.8 dpm/100cm² respectively) was identified greater than the Transuranic DCGL limit of 100.0 dpm/100cm². The locations were sealed, allowed to decay and re-surveyed. All re-survey results were less than the Transuranic DCGL and are the values reported in the TSA Data Summary.
- Initial sample net activity for locations 33, 34 and 186 (168.8 dpm/100cm², 175.3 dpm/100cm² and 118.7 dpm/100cm² respectively) was identified greater than the Transuranic DCGL limit of 100.0 dpm/100cm². Concrete core samples were taken and analyzed by Canberra ISOCs Gamma Spectroscopy. The activity was determined to be from Uranium and/or other naturally occurring isotopes. All sample results were below the Uranium DCGL 5,000.0 dpm/100cm² and are the values reported in the TSA Data Summary. No further investigation is required. The sample gamma spectroscopy results can be found as the last page of the Data Summary in Attachment B.
- The minimum number of samples required per MARSSIM for this Class 3 survey was not calculated based on the site-wide Pre-Demolition Survey Plan (MAN-127-PDSP) requirements. This deviation and approach was approved via Department Of Energy letter, 02-DOE-01598, Dated December 13, 2002; and approved by CDPHE letter, RE: Proposed Deviations From the Pre-Demolition Survey Plan (PDSP), Dated January 27, 2003.
- It took several months for the alternate Westside exterior PDS strategy approach to be approved by DOE and CDPHE. In the mean time, building-specific PDS efforts progressed and some exterior surveys were performed as part of the building-specific PDS efforts versus the Westside exterior PDS strategy. Additionally, some buildings were missed and will be surveyed as part of their respective up coming building-specific PDS efforts. Extra biased points on external sidewalks and walkways were added to the effort in order to facilitate future W/PRE release surveys of these items. In conclusion, an adequate amount of exterior surveys were (or will be) performed on the westside facilities in order to ensure that the applicable westside facilities meet PDSP radiological release criteria.

For the individual buildings that were not performed exactly as detailed in the Westside Exterior PDS Plan, the following explanations detail what happened or what will happen in terms of exterior surveys:

B122S – This building was physically attached to B122. Although no exterior surveys were performed as specified in the Westside Exterior PDS Plan, it was assumed that the exterior was below the PDSP unrestricted release limits based on radiological engineering judgement and representative surveys performed on adjacent buildings conducted during the RISS West Side Exterior PDS effort.

B231 - Exterior surveys will be performed as part of the up coming building-specific PDS effort.

B441 - Exterior surveys were performed as part of the building-specific PDS effort.

B570 - Exterior surveys were performed as part of the Westside PDS effort but only 2 of 4 planned locations were performed. However, based on radiological engineering judgement, the 2 of 4 planned locations were representative surveys, and the surveys performed on adjacent buildings conducted during the RISS West Side Exterior PDS effort were of adequate quality and quantity to conclude that the B570 exterior was below the PDSP unrestricted release limits.

T121A - Exterior surveys were performed as part of the building-specific PDS effort.

T122A - Exterior surveys will be performed as part of the up coming building-specific PDS (or W/PRE) effort.

T441A - Exterior surveys were performed as part of the building-specific PDS effort.

T664B - Exterior surveys were performed as part of the Westside PDS effort (locations 141 and 142). The table in Attachment B identified this trailer as B664A versus T664A.

T891B - No exterior surveys were performed as part of the building-specific PDS effort, however it was assumed that the exterior was below the PDSP unrestricted release limits based upon representative surveys performed on adjacent buildings conducted during the RISS West Side Exterior PDS effort (discussed in Section 3 of the T891B RLCR).

T900A - Exterior surveys will be performed as part of the up coming building-specific PDS effort.

T900B - Exterior surveys will be performed as part of the up coming building-specific PDS effort.

Some additional facilities were not originally part of the Westside PDS proposal, but were added during the performance of the surveys, including B125 foundation, B706 sidewalk, B711, B718 walkway, PAC's 2 sidewalk, and Valve Vault 13 shed.

Based upon an independent review of the radiological data, it was determined that the original project DQOs satisfied MARSSIM guidance. All facility contamination levels were below applicable unrestricted release levels. Minimum survey requirements were met, sampling/survey protocol was performed in accordance with applicable procedures, survey units were properly designed and bounded, and instrument performance and calibration were within acceptable limits thereby ensuring accuracy criteria. All results meet the radiological PDS unrestricted release criteria.

Chain of Custody was intact; documentation was complete, hold times were acceptable (where applicable,) and packaging integrity/custody seals were maintained throughout the sampling/analysis process. On this basis, the exterior surfaces of the Westside facilities meet the PDSP unrestricted release criteria with the confidences stated herein.

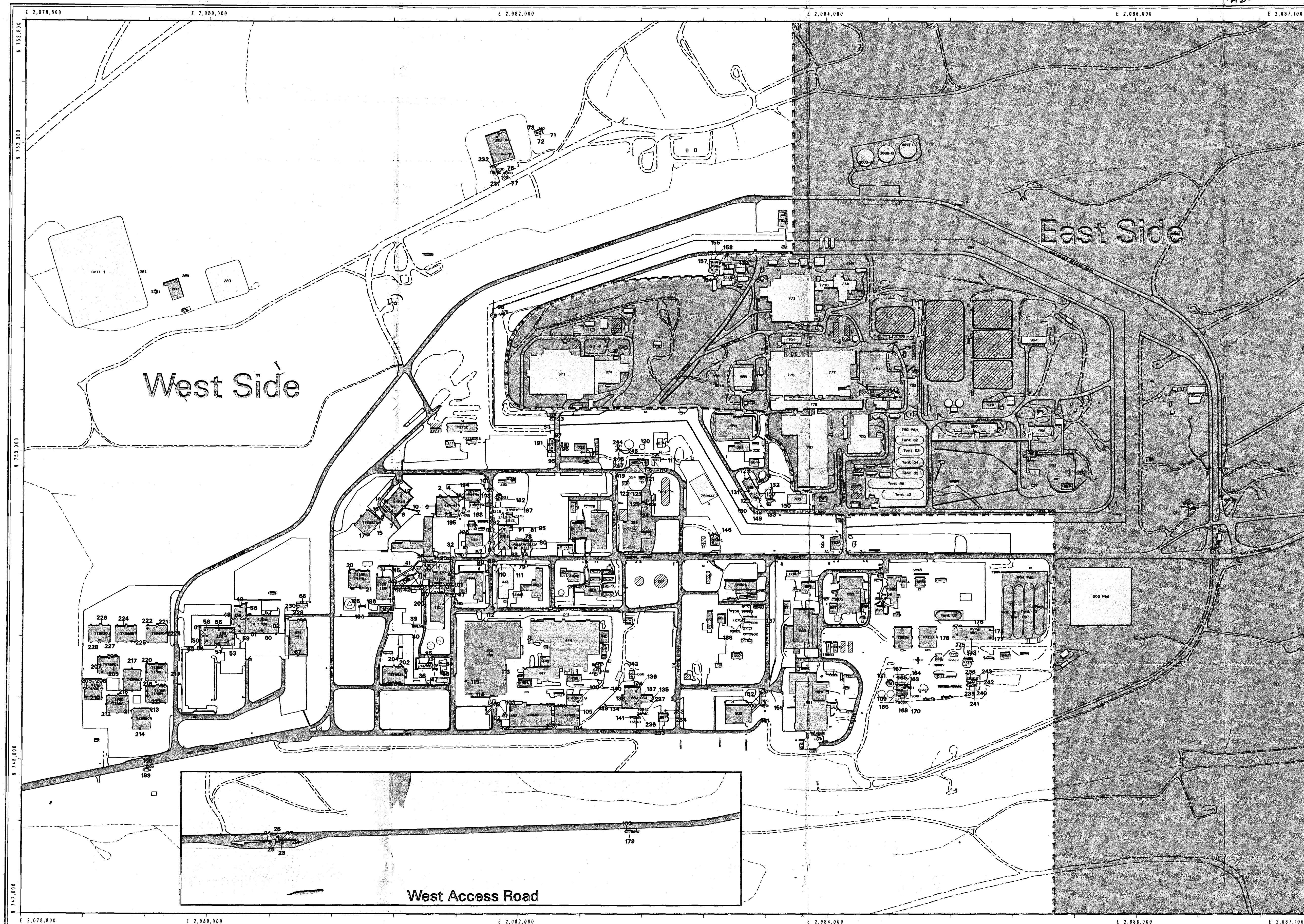
Table C-1 V&V of Radiological Data

V&V CRITERIA, RADIOLGICAL SURVEYS		K-H RSP 16.00 Series MARSSIM (NUREG-1575)		
QUALITY REQUIREMENTS				
	Parameters	Measure	frequency	COMMENTS
ACCURACY	initial calibrations	90%<x<110%	≥1	Multi-point calibration through the measurement range encountered in the field; programmatic records.
	daily source checks	80%<x<120%	≥1/day	Performed daily/within range.
	local area background: Field	typically < 10 dpm	≥1/day	All local area backgrounds were within expected ranges (i.e., no elevated anomalies.)
PRECISION	field duplicate measurements for TSA	≥5% of real survey points	≥10% of reals	N/A
REPRESENTATIVENESS	MARSSIM methodology: Survey Unit EXT-B-001 (exterior).	statistical and biased	NA	Random w/ statistical confidence.
	Survey Maps	NA	NA	Random and biased measurement locations controlled/mapped to ±1m.
	Controlling Documents (Characterization Pkg; RSPs)	qualitative	NA	Refer to the Characterization Package (planning document) for field/sampling procedures (located in Project files); thorough documentation of the planning, sampling/analysis process, and data reduction into formats.
COMPARABILITY	units of measure	dpm/100cm ²	NA	Use of standardized engineering units in the reporting of measurement results.
COMPLETENESS	Plan vs. Actual surveys usable results vs. unusable	>95% >95%	NA	See Table E-4 for details.
SENSITIVITY	detection limits	TSA: ≤50 dpm/100cm ² RA: ≤10 dpm/100cm ²	all measures	MDAs ≤ 50% DCGL _w per MARSSIM guidelines (PDS performed to PDS requirements).

Table C-2 Data Completeness Summary

ANALYTE	Building/Area/ Unit	Sample Number Planned (Real & QC)	Sample Number Taken (Real & QC)	Project Decisions (Conclusions) & Uncertainty	Comments (RIN, Analytical Method, Qualifications, etc.)
Radiological	Survey Area 1 Survey Unit: EXT-B-001 West Side Building Exteriors	188 α TSA (0 random/188 biased) 188 α Smears (0 random/188 biased) 10 QC TSA 1 meter scan at each TSA location; and 10% scan of the associated exterior concrete pads and sidewalks (where applicable)	247 α TSA (0 random/247 biased) 247 α Smears (0 random/247 biased) 15 QC TSA 1 meter scan at each TSA location; and 10% scan of the associated exterior concrete pads and sidewalks (where applicable)	No contamination found at any location; all values below PDS unrestricted release limits	Transuranic DCGLs used. Refer to Attachment C, <i>Data Quality Assessment Detail (DQA)</i> , for discussion regarding elevated readings at sample locations 4, 33, 34, 36, 186, 190 and 200.

#35



West Side Exterior Survey Unit

EXPLANATION

- Exteriors Clean
- Exteriors Contaminated (loading dock areas only)
- East-West Dividing Line
- Sample Location (TSA, RSA and 1 meter scan collected)



Scale = 1 : 3780
1 inch represents 315 feet



State Plane Coordinate Projection
Colorado Central Zone
Datum: NAD27

U.S. Department of Energy
Rocky Flats Environmental Technology Site

GIS Dept. 303-968-7707

Prepared by:



Prepared for:



July 15, 2003

SW-A-005066